Amendments to the Claims

Please amend the claims without prejudice. The listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of the Claims

- [c1] (Original) A method of evaluating changes for a wellbore interval, comprising: obtaining first log data acquired by a logging sensor (8, 5, 6, 3) during a first pass over the wellbore interval;
 - obtaining second log data at a time later than the first log data, said second log data being acquired by the logging sensor during a second pass over the wellbore interval;
 - calculating a plurality of delta values between the first log data and the second log data;
 - deriving an observed effect using the plurality of the delta values; and identifying a correlation between the observed effect and a causal event.
- [c2] (Original) The method of claim 1, further comprising displaying the correlation on a display device (82).
- [c3] (Currently amended) The method of any of claims 1-2, wherein the logging sensor measures at least one parameter selected from the group consisting of gamma ray, resistivity, neutron porosity, density, ultrasonic caliper, and sigma.
- [c4] (Currently amended) The method of any-of claims 1-3, wherein the logging sensor is disposed on an integrated measurement tool.
- [c5] (Currently amended) The method of any-of claims 1-4, wherein the correlation is a depth correlation.

- [c6] (Currently amended) The method of any-of claims 1-5, wherein the correlation is a time correlation.
- [c7] (Original) The method of claim 1, further comprising:
 calculating a relative effect using a sensitivity factor to adjust the correlation; and
 displaying the correlation and the relative effect on a display device (82).
- [c8] (Original) A system for evaluating changes for a wellbore interval comprising:
 a well log data acquisition system (7) for acquiring first log data and second log
 data, at a time later than said first log data, from a logging sensor (8, 5, 6, 3)
 during a plurality of passes over the wellbore interval; and
 - a well log data processing system (72,74, 76) for:
 - calculating a plurality of delta values between the first log data and the second log data;
 - deriving an observed effect using the plurality of the delta values; and identifying a correlation between the observed effect and a causal event.
- [c9] (Original) The system of claim 8, further comprising a display device (82) for displaying the correlation.
- [c10] (Currently amended) The system of any-of claims 8-9, wherein the logging sensor measures at least one parameter selected from the group consisting of gamma ray, resistivity, neutron porosity, density, ultrasonic caliper, and sigma.
- [c11] (Currently amended) The system of any of claims 8-10, wherein the logging sensor is disposed on an integrated measurement tool.
- [c12] (Currently amended) The system of any-of claims 8-11, wherein the correlation is a depth correlation.
- [c13] (Currently amended) The system of any of claims 8-12, wherein the correlation is a time correlation.

- [c.1.4] (Original) The system of claim 8, further comprising a well log data processing system (72, 74, 76) for calculating a relative effect using a sensitivity factor to adjust the correlation; and displaying the correlation and the relative effect on a display device.
- [c15] (Original) A computer system for evaluating changes for a wellbore interval, comprising:

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a processor (72);
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a memory (74);

a storage device (76);

a computer display (82); and

software instructions stored in the memory for enabling the computer system under control of the processor, to perform:

gathering first log data from a logging sensor during a first pass over the wellbore interval;

gathering second log data, at a time later than said first log data, from the logging sensor during a second pass over the wellbore interval;

calculating a plurality of delta values between the first log data and the second log data;

deriving an observed effect using the plurality of the delta values;

identifying a correlation between the observed effect and a causal event; and

displaying the correlation on the computer display.